REMARKS

Claims 1 and 13 have been amended to recite that the composite material consists essentially of mineral fibers and glass fibers. Claims 4 and 16 have been amended to place the claims in proper Markush format. Claim 22 has been amended to depend from independent claim 13. Support for new claim 23 is found at least at page 6, lines 15 – 19, page 7, line 25 – page 8, line 2, and original claim 1. New claim 24 is supported at least by page 7, lines 17 – 20 and original claim 8. Support for new claim 25 is found at least at page 6, line 26 – page 7, line 2 and original claim 2. New claim 26 is supported at least by page 6, lines 15 – 26 and original claims 3 and 4. Applicants respectfully submit that these amendments are proper despite the finality of the outstanding Office Action because the amendments place the application in condition for allowance and/or place the application in better form for appeal.

In addition, with respect to newly added claims 23 – 26, Applicants submit that these claims should be considered by the Examiner because claims 23 – 26 contain the same features and limitations as original claims 1 – 4 and 8 with the exception that the mineral and organic fibers are present in fibrous form in the energy absorbing element. Applicants understand that Applicants cannot, as a matter of right, amend any finally rejected claim, add new claims, or reinstate previously canceled claims after a final Office Action. However, according to MPEP §714.13, amendments that cancel claims, adopt Examiner suggestions, remove issues for appeal, or in some other way requires only a cursory review by the Examiner may be considered. In this regard, Applicants submit that newly added claim 23 is original claim 1 re-written with the added feature that the mineral and organic fibers are present in fibrous form in the energy absorbing element. Claims 24 – 26 include the identical features recited in original claims 1 – 4 and 8. Because claims 23 – 26 recite the same

materials and the same limitations set forth in original claims 1 – 4 and 8, Applicants submit that the prior art search for claims 23 – 26 has already been conducted. As such, Applicants respectfully submit that only a cursory review of the cited references is necessary by the Examiner to determine the patentability of these new claims. Accordingly, Applicants respectfully request that new claims 23 – 26 should be considered and entered.

No question of new matter arises and entry of the amendments is respectfully requested.

Claims 1 – 8 and 13 - 26 are before the Examiner for consideration.

Rejection under 35 U.S.C. §102(b)

Claims 1 – 8 and 13 – 20 have been rejected under 35 U.S.C. §102(b) as being anticipated by Tanaka *et al.* (U.S. Patent No. 5,258,089). In particular, the Examiner asserts that Tanaka *et al.* disclose an interior finishing panel that includes a surface material and a sheath formed of a co-fiberized composite material formed of glass fibers and organic fibers. In addition, the Examiner asserts that the recited feature of the thickness of the composite material being less than the initial thickness is a process limitation and does not add structure to the energy absorbing element. Thus, the Examiner concludes that because the interior finishing material of Tanaka *et al.* is semi-compacted and has the same thickness as the inventive energy absorbing element, it is irrelevant whether the material of Tanaka *et al.* was initially thicker or not.

In response to this rejection, Applicants respectfully direct the Examiner's attention to the amendments made to independent claims 1 and 13 and submit that Tanaka *et al.* do not teach or suggest the claims as amended. Tanaka *et al.* disclose an interior finishing material that includes a substrate, an adhesive layer, and a surface material. (*See* Abstract and column

2, lines 5 – 13). The substrate is formed of glass fibers, optionally organic fibers, a thermoplastic resin binder, and expandable microbeads. (*See* column 2, column 3, lines 7 – 59). Preferably, these expandable microbeads are present in an amount of from 2 – 50 parts by weight for every 100 parts by weight of the thermoplastic resin binder. (*See* column 4, lines 14 – 17). However, Tanaka *et al.* teach that when a smaller amount of the expandable microbeads is present in the substrate, the moldability of the substrate is poor, and the molded article obtained tends to be deformed at high temperatures. (*See* column 4, lines 17 – 20). On the other hand, when an excess amount of the expandable microbeads is present in the substrate, the volume of the expanded substrate layer becomes too large, which results in insufficient stiffness of the molded article. (*See* column 4, lines 20 – 23).

As amended, claims 1 and 13 define a composite material that consists essentially of mineral fibers and organic fibers. As described in MPEP §2111.03, the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials and those materials that "do not materially affect the basic and novel characteristics of the claimed invention." It is clear from the teachings of Tanaka *et al.* that the amount of microbeads present in the substrate is essential to obtain a product that has the desired moldability and stiffness. In particular, too little microbeads results in a substrate that is deformable and too many microbeads results in a substrate that is not sufficiently stiff. In the present invention, Applicants have obtained an energy absorbing element formed of at least one layer of composite material that has sufficient stiffness to withstand and cushion impact and sufficient moldability to form a desired molded shape without including microbeads in the composite material. Thus, Applicants submit that the microbeads described in Tanaka *et al.* affect the basic and novel characteristics of the claimed invention. As such, independent claims 1 and 13, and all claims dependent therefrom, are non-anticipatory, non-obvious, and patentable.

With respect to newly added claim 23, Applicants submit that Tanaka *et al.* do not teach an energy absorbing element that includes at least one layer of a composite material formed of a mixture of mineral fibers and organic fibers that are present in a fibrous form in the energy-absorbing element. In the Example set forth in Tanaka *et al.*, a sheet formed of 90 parts by weight of glass fibers and 10 parts by weight of polyester fibers (organic fibers) was impregnated with an emulsion containing a thermoplastic resin binder and microbeads. (See column 6, line 67 – column 7, line 21). An adhesive and a surface material were subsequently added and the product was press molded. (See column 7, lines 43 – 51). A cross-section of the resulting interior finishing material is shown in Figure 1 of Tanaka *et al.* (See column 8, lines 7 – 8). As illustrated in Figure 1 of Tanaka *et al.*, the interior finishing material is formed of glass fibers 2a, binder 2b, and microbeads 2c. No polyester fibers (organic fibers) are present in fibrous form in the final product.

In the present invention, the composite material is formed of mineral fibers and organic fibers. During the formation of the energy-absorbing element, the composite material is heated to make it soft, pliable, and otherwise capable of being molded or deformed. (*See* specification at page 8, lines 11 – 15). Thus, the composite material is not heated to melt either the glass fibers or the organic fibers, it is heated to make the composite material pliable for molding. As a result, both the glass fibers and the organic fibers are present in the energy absorbing element in fibrous form. Applicants submit that this feature is neither taught nor suggested within Tanaka *et al.* As such, newly added claim 23 is not anticipated by, or obvious over, Tanaka *et al.* Therefore, independent claim 23, and all claims dependent therefrom, are patentable.

In view of the above, Applicants submit that the present invention not anticipated by, or obvious over, Tanaka *et al.* and respectfully request that the Examiner reconsider and withdraw this rejection.

Rejection under 35 U.S.C. §103(a)

Claim 21 has been rejected under 35 U.S.C. §103(a) as being obvious over Tanaka *et al.* (U.S. Patent No. 5,258,089). In particular, the Examiner asserts that Tanaka *et al.* teach all the features of the presently claimed invention with the exception of the density of the trim panel. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to use a polyurethane having the claimed density because it is within the general skill of a worker in the art to select a known material on the basis of it suitability for its intended use.

Applicants respectfully direct the Examiner's attention to the amendments made to independent claim 13 and to the arguments presented above with respect to claims 1 – 8 and 13 – 20 under 35 U.S.C. §102(b). As discussed above, amended claim 13 defines a composite material consisting essentially of mineral fibers and organic fibers. It is clear from the teachings of Tanaka *et al.* that the amount of microbeads present in the substrate is essential to obtain a product that has the desired moldability and stiffness. Because the microbeads present in the substrate of Tanaka *et al.* materially affect the basic and novel characteristics of the claimed invention, amended claim 13 is distinguishable from the interior finishing material of Tanaka *et al.* Since claim 21 is dependent upon claim 13, which, as discussed above, is patentable over Tanaka *et al.*, claim 21 is also patentable.

With respect to newly added claims 23 – 26, Applicants submit that independent claim 23 defines an energy absorbing element that is not taught or suggested within Tanaka *et*

al. As discussed previously, the Example of Tanaka *et al.* describes a substrate that initially contains glass fibers, polyester fibers (organic fibers), a binder, and microbeads. However, after subsequent heating and molding to form the interior finishing material illustrated in Figure 1, the polyester fibers (organic fibers) were no longer present in fibrous form. As shown in Figure 1, the interior finishing material is formed of glass fibers 2a, binder 2b, and microbeads 2c. In the energy absorbing element of the present invention, both the glass fibers and the organic fibers which make up the composite material are present in fibrous form. Such a feature is neither taught nor suggested by Tanaka *et al.* Thus, independent claim 23, and all claims dependent therefrom, are non-obvious and patentable.

In view of the above, Applicants submit that claims 21 and 23 – 26 are not anticipated by, or obvious over, Tanaka *et al.* and respectfully request that the Examiner reconsider and withdraw this rejection.

Rejection under 35 U.S.C. §103(a)

Claim 22 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka *et al.* (U.S. Patent No. 5,258,089) in view of Carroll III *et al.* The Examiner admits that Tanaka *et al.* do not disclose a HICd value of less than about 1000. The Examiner cites Carroll III *et al.* as disclosing that HICd is a plot of acceleration vs. time used to measure the performance of a human headform impacting the interior of a motor vehicle. In addition, Carroll III *et al.* is asserted to teach that designers prefer the HICd to be less than 1000. The Examiner states that because the exact HICd value of the sheath is deemed to be a cause effective variable with regard to the flexibility of the sheath, it would have been obvious to one of ordinary skill in the art to determine the optimum value of the HICd value

through routine experimentation and to achieve a value of less than 1000 in view of the teachings of Carroll III *et al.*

In response to this rejection, Applicants respectfully direct the Examiner's attention to the amendments made to claim 13 and the arguments set forth above with respect to claims 1 – 8 and 13 – 20 under 35 U.S.C. §102(b). As discussed above, amended claim 13 defines a composite material consisting essentially of mineral fibers and organic fibers. It is clear from the teachings of Tanaka *et al.* that the amount of microbeads present in the substrate is essential to obtain a product that has the desired moldability and stiffness. Because the microbeads present in the substrate of Tanaka *et al.* materially affect the basic and novel characteristics of the claimed invention, the composite material of the present invention is distinguishable from the substrate of Tanaka *et al.* As amended, claim 22 is dependent upon claim 13, which, as discussed above, is patentable over Tanaka *et al.* Therefore, claim 22 is also patentable.

With respect to newly added claims 23 – 26, Applicants submit that independent claim 23 defines an energy absorbing element that is neither taught nor suggested within Tanaka *et al.* As discussed previously, the Example of Tanaka *et al.* describes a substrate that initially contains glass fibers, polyester fibers (organic fibers), a binder, and microbeads. However, after subsequent heating and molding to form the interior finishing material illustrated in Figure 1, the polyester fibers (organic fibers) were no longer present in fibrous form. As shown in Figure 1, the interior finishing material of Tanaka *et al.* is formed of glass fibers 2a, binder 2b, and microbeads 2c. In the energy absorbing element of the present invention, both the glass fibers and the organic fibers which make up the composite material are present in fibrous form. Such a feature is neither taught nor suggested by Tanaka *et al.* Further, Carroll III *et al.* add nothing to the teachings of Tanaka *et al.* to meet the features of

the invention as set forth in claim 23. Thus, Applicants submit that the combination of the Examiner's cited references neither teaches nor suggests the presently claimed invention. As a result, independent claim 23, and all claims dependent therefrom, are non-obvious and patentable.

In view of the above, Applicants submit that the present invention is not obvious over Tanaka *et al.* in view of Carroll III *et al.* and respectfully request that this rejection be reconsidered and withdrawn.

CONCLUSION

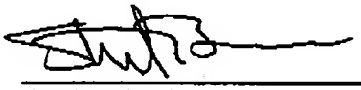
In light of the above, Applicants believe that this application is now in condition for allowance and therefore request favorable consideration.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 50-0568 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

Date: 24 Nov 2003



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